spheric origin. The visibility of very large spots, provided that they are not faint, is almost independent of the state of the seeing. But the smaller a spot may happen to be, the more is its visibility affected by poor definition. Such a spot as C would not be altogether obliterated by the worst and most confused seeing obtainable in practice, but it would certainly appear less conspicuous under such conditions.

Equatorial Comparisons of Neptune with 114 (o) *Tauri*, 1897 *December*. By John Tebbutt.

In consequence of illness and cloudy weather I found it impossible to obtain earlier comparisons than those which accompany this letter. The observing conditions were, however, excellent on each evening, and the measures were made with the filar micrometer on the 8-inch equatorial and in a bright field. Each coordinate of the planet is the result of twenty comparisons. The mean place of the star for 1897·0 is derived from the following Catalogues: Washington, 1860, 3rd ed.; Radcliffe, 1860–1890; Glasgow, 1870; and Greenwich, 1864, 1872, 1880. The precessions with the secular variations have been employed from the Radcliffe Catalogue, 1890, with checks from the same elements in the Greenwich Catalogue, 1880, and the annual proper motions in R.A. and N.P.D. have been adopted as $-0^{s}\cdot0011$ and $-0''\cdot006$. By assigning equal weights to the Catalogues the mean place for 1897·0 is R.A.$=5^{h}\ 21^{m}\ 26^{s}\cdot88$ N.P.D.$=68^{\circ}\ 9'\ 4''\cdot3$. The star is also one of Professor Newcomb's Standard Clock and Zodiacal stars.

In the last column of the accompanying table will be found a comparison of the observed places with the transit ephemeris on page 281 of the *Nautical Almanac*. The *Nautical Almanac* does not furnish any semidiameter for the planet, but the *American Ephemeris* assigns $1''\cdot3$ for the time of opposition. This value must, I think, be much too great.

Results of Micrometer Comparisons of Neptune and 114 (*o*) *Tauri.*

1897.	Windsor Mean Time.	Planet Centre—Star. R.A.	Planet Centre—Star. N.P.D.	Star Reductions. R.A.	Star Reductions. N.P.D.	Parallax Corrections. R.A.	Parallax Corrections. N.P.D.	Geocentric Apparent Place of Planet's Centre. R.A.	Geocentric Apparent Place of Planet's Centre. N.P.D.	Correction to *Nautical Almanac.* R.A.	Correction to *Nautical Almanac.* N.P.D.
	h m s	m s	′ ″	s	″	s	″	h m s	° ′ ″	s	″
Dec. 22	10 55 18	−0 53·06	+6 26·5	+6·02	−9·4	0·00	+0·2	5 20 39·84	68 15 21·6	−0·12	+3·1
„ 23	10 33 33	−1 0·16	+6 32·2	+6·03	−9·4	0·00	+0·2	5 20 32·75	68 15 27·3	−0·15	+3·1
„ 24	10 9 27	−1 7·15	+6 37·9	+6·03	−9·4	0·00	+0·2	5 20 25·76	68 15 33·0	−0·11	+3·1
„ 26	10 10 5	−1 21·32	+6 48·7	+6·05	−9·3	0·00	+0·2	5 20 11·61	68 15 43·9	−0·12	+2·8
„ 27	9 59 10	−1 28·27	+6 54·4	+6·05	−9·3	0·00	+0·2	5 20 4·66	68 15 49·6	−0·09	+3·0
„ 28	10 19 24	−1 35·40	+6 59·9	+6·06	−9·3	0·00	+0·2	5 19 57·54	68 15 55·1	−0·14	+3·0

Windsor, New South Wales:
1898 *January* 23.

Nebulæ observed at the Royal Observatory, Cape of Good Hope.

(Communicated by Dr. David Gill, C.B., &c., H.M. Astronomer.)

Name.	R.A. 1860. h m s	Dec. ° ′	Authority for position.	Description.		Observer.
N.G.C. 1398, Winnecke	3 32 58·2	−26 47·9	Equ. comp.	Small round neb. Bright in middle	F.	1887 Mar. 17
C.P.D. −47°, 418 New	4 7 34·3	−47 37·3	C.P.D.	Nebulous star (8·8 vis., 10·4 photo.), nebulosity 1′ in diameter	I.	1897 Feb. 5
New	11 34	−45 42	Circle reading	...	F.	1884 July 27
New	14 14	− 5 21	Circle reading	...	F.	1883 Sept. 20
Cor. D.M. −35°, 9764 New	14 36 45	−35 34·7	Cor. D.M.	Elliptical neb. surrounding two stars as if they were the foci of an eclipse, mags. 9·5 and 10. The Cor. D.M. mag. of the chief star is 9·7. In a high-power field with Lac. 6076	I.	1897 Feb.
C.P.D. −32°, 3780 N.G.C. 5824, Barnard	14 55 22·7	−32 30·8	C.P.D.	C.P.D. mag. = 9·4. Bright small nebula, mag. 9·0	F.	1883 Sept. 25
New	16 23	−25 45	Circle reading	Follows a faint star 4·5 secs., and is 0′·5 S.	F.	1887 Sept. 8
N.G.C. 6302, Barnard	17 4 17·5	−36 55·8	Equ. comp.	Small, very bright nebula	F.	1887 Sept. 11
New	19 20 36	−46 59	Circle reading	A faint nebula joined to, but *np*, a 9·5 mag. star. There is perhaps a stellar nucleus.	I.	1897 Nov. 11